(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 9 December 2004 (09.12.2004)

PCT

(10) International Publication Number WO 2004/106743 A1

(51) International Patent Classification?:

F04B 53/00

(21) International Application Number:

PCT/GB2004/002253

26 May 2004 (26.05.2004) (22) International Filing Date:

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0312249.6

29 May 2003 (29.05.2003)

- (71) Applicant (for all designated States except US): SPICKET VALVES AND PUMPS LIMITED [GB/GB]; Lawpark Farm, Lochwinnoch Road, Kilmacolm, Renfrewshire PA13 4TA (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): KENNEDY, George, Coulter [GB/GB]; Lawpark Farm, Lochwinnoch Road, Kilmacolm, Renfrewshire PA13 4TA (GB).
- (74) Agent: KENNEDYS PATENT AGENCY LIMITED; Floor 5, Queens House, 29 St. Vincent Place, Glasgow G1 2DT (GB).

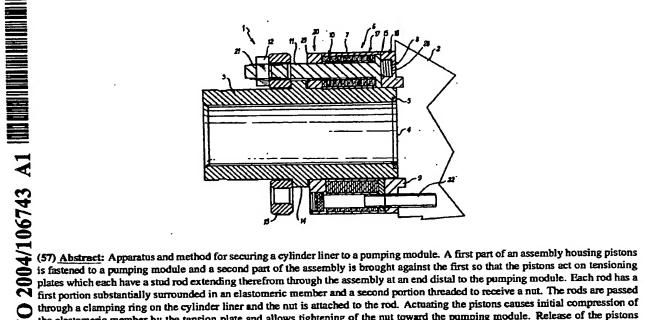
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SL, SK, TR), OAPI (BF, BJ, CF, CG, Cl, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LINER RETENTION SYSTEM



through a clamping ring on the cylinder liner and the nut is attached to the rod. Actuating the pistons causes initial compression of the elastomeric member by the tension plate and allows tightening of the nut toward the pumping module. Release of the pistons then causes expansion of the elastomeric member to forcibly compel the cylinder liner towards the pumping module.



